

Connector sets and interconnect components to be used in optical fibre communication systems - Product specifications Part 14-1: Simplex and duplex cords made from simplex plugs with cylindrical ferrules, using EN 60793-2-50 single-mode B-652 ou B-657 fibre for Category C according to EN 61753-1

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 50377-14-1:2021 sisaldab Euroopa standardi EN 50377-14-1:2021 ingliskeelset teksti.	This Estonian standard EVS-EN 50377-14-1:2021 consists of the English text of the European standard EN 50377-14-1:2021.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation.
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Standard on kättesaadav Eesti Standardimis- ja Akrediteerimiskeskusest.	The standard is available from the Estonian Centre for Standardisation and Accreditation.

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ICS 33.180.20

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English Version

**Connector sets and interconnect components to be used in optical fibre communication systems - Product specifications
Part 14-1: Simplex and duplex cords made from simplex plugs with cylindrical ferrules, using EN 60793-2-50 single-mode B-652 ou B-657 fibre for Category C according to EN 61753-1**

Jeux de connecteurs et composants d'interconnexion à utiliser dans les systèmes de communication par fibres optiques - Spécifications de produit - Partie 14-1: Cordons simplex et duplex constitués de fiches simplex avec ferrules cylindriques, utilisant les fibres unimodales B-652 ou B-657 de l'EN 60793-2-50 pour la catégorie C conformément à l'EN 61753-1

Steckverbindersätze und Verbindungsbaulemente für Lichtwellenleiter-Datenübertragungssysteme - Produktnormen - Teil 14-1: Simplex- und Duplex-Kabel mit Simplex-Steckverbindern mit zylindrischen Ferrulen mit Einmodenfasern der Kategorie B1 oder B6 nach EN 60793-2-50 für Kategorie C nach EN 61753-1

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European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

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European foreword

This document (EN 50377-14-1:2021) has been prepared by CLC/TC 86BXA “*Fibre optic interconnect, passive and connectorised components*”.

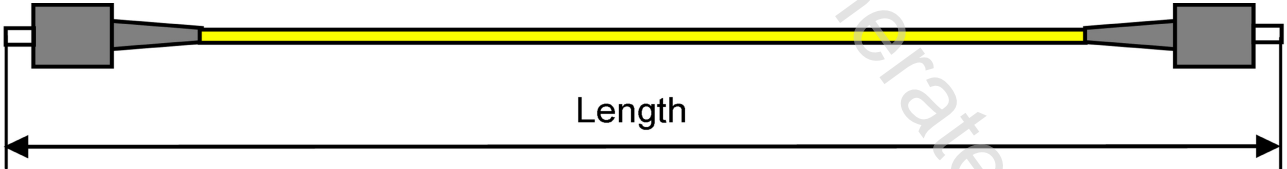
The following dates are fixed:

- latest date by which this document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2022-08-09
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) 2022-08-09

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Connector sets and interconnect components to be used in optical fibre communication systems – product specifications	
Part 14–1: Simplex and duplex cords made from simplex plugs with cylindrical ferrules, using EN 60793-2-50 single-mode B-652 or B-657 fibre for Category C according to EN IEC 61753-1	
Description	Performance
Fibre category: EN 60793-2-50 Types B-652 and B-657 Cable type: EN 60794-2-50 EN 60794-2-51	Application: For use indoors (EN Category C: controlled environment) Attenuation grades: (random mate) B: $\leq 0,12$ dB mean $\leq 0,25$ dB for ≥ 97 % of measurements C: $\leq 0,25$ dB mean $\leq 0,50$ dB for ≥ 97 % of measurements Return loss grade: (random mate) 1: ≥ 60 dB 2: ≥ 45 dB
Related documents:	
EN 50377 series	Connector sets and interconnect components to be used in optical fibre communication systems – Product specifications
EN 60793-2-50	Optical fibres – Part 2–50: Product specifications – Sectional specification for category B single-mode fibres (IEC 60793-2-50)
EN 60794-2-50	Optical fibre cables – Part 2–50: Indoor cables – Family specification for simplex and duplex cables for use in terminated cable assemblies (IEC 60794-2-50)
EN 60794-2-51	Optical fibre cables – Part 2–51: Indoor cables - Detail specification for simplex and duplex cables for use in cords for controlled environment
EN 61300 series	Fibre optic interconnecting devices and passive components – Basic test and measurement procedures (IEC 61300 series)
EN IEC 61753-1	Fibre optic interconnecting devices and passive components performance standard – Part 1: General and guidance for performance standards (IEC 61753-1)
Outline and maximum dimensions:	
	

1 Scope

1.1 Product definition

This document contains the initial, start of life, dimensional, optical, mechanical and environmental performance requirements that an assembled single mode cord with cylindrical ferruled connectors will meet in order for it to be categorized as an EN standard product.

Since different variants and grades of performance are permitted, product marking details are given in 4.5 and Clause 5.

1.2 Intermateability of the plugs

Where the products conforming to the requirements of this document are intermateable, the resulting level of random attenuation performance will be in accordance with Table 1. The intention is that this will be true irrespective of the manufacturing source(s) of the product.

When intermating plug variants having different attenuation grades (as specified in EN 61755-1) the resulting level of attenuation cannot be any better than the worst attenuation grade of the individual plugs.

Intermating a grade C plug with a grade B plug will result in a grade C level of random attenuation performance.

Table 1 — Attenuation grade matrix

Plug 1 grade	Plug 2 grade	Ensured attenuation grade
B	B	B
C	C	C
B	C	C
C	B	C

1.3 Operating environment

The tests selected, combined with the severities and durations, are representative of an EN IEC 61753-1 Category C environment.

1.4 Reliability

Whilst the anticipated service life expectancy of the product in this environment is 20 years, compliance with this standard does not guarantee the reliability of the product. This is predicted using a recognized reliability assessment program.

1.5 Quality assurance

Compliance with this standard does not guarantee the manufacturing consistency of the product. This is expected to be maintained using a recognized quality assurance program.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 50377 (series), *Connector sets and interconnect components to be used in optical fibre communication systems – Product specifications*

EN 60793-2-50, *Optical fibres - Part 2-50: Product specifications - Sectional specification for class B single-mode fibres (IEC 60793-2-50)*

EN 60794-2-50, *Optical fibre cables - Part 2-50: Indoor cables - Family specification for simplex and duplex cables for use in terminated cable assemblies (IEC 60794-2-50)*

EN 60794-2-51, *Optical fibre cables - Part 2-51: Indoor cables - Detail specification for simplex and duplex cables for use in cords for controlled environment (IEC 60794-2-51)*

EN IEC 61300-2-4, *Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-4: Tests - Fibre or cable retention (IEC 61300-2-4)*

EN 61300-2-5, *Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-5: Tests – Torsion (IEC 61300-2-5)*

EN 61300-2-22, *Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-22: Tests - Change of temperature (IEC 61300-2-22)*

EN 61300-2-42, *Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-42: Tests - Static side load for strain relief (IEC 61300-2-42)*

EN 61300-2-44, *Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-44: Tests - Flexing of the strain relief of fibre optic devices (IEC 61300-2-44)*

EN 61300-3-3, *Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3-3: Examinations and measurements - Active monitoring of changes in attenuation and return loss (IEC 61300-3-3)*

EN 61300-3-4, *Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3-4: Examinations and measurements – Attenuation (IEC 61300-3-4)*

EN 61300-3-6, *Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3-6: Examinations and measurements - Return loss (IEC 61300-3-6)*

EN 61300-3-22, *Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3-22: Examinations and measurements - Ferrule compression force (IEC 61300-3-22)*

EN 61300-3-28, *Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3-28: Examinations and measurements - Transient loss (IEC 61300-3-28)*

EN 61300-3-34, *Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3-34: Examinations and measurements - Attenuation of random mated connectors (IEC 61300-3-34)*

EN 61300-3-47, *Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3-47: Examinations and measurements - End face geometry of PC/APC spherically polished ferrules using interferometry (IEC 61300-3-47)*

EN IEC 61753-1, *Fibre optic interconnecting devices and passive components - Performance standard - Part 1: General and guidance (IEC 61753-1)*

EN 61755-1, *Fibre optic connector optical interfaces - Part 1: Optical interfaces for single mode non-dispersion shifted fibres - General and guidance (IEC 61755-1)*

3 Terms and definitions

No terms and definitions are listed in this document.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <https://www.electropedia.org/>
- ISO Online browsing platform: available at <https://www.iso.org/obp>